

In the claims:

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28. ~ **(Amended Twice)** A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

29. **(Reiterated)** The method of claim 28, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

30. **(Reiterated)** The method of claim 28, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

31. **(Reiterated)** The method of claim 28, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

32. **(Reiterated)** The method of claim 28, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

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46. **(Amended)** The method of claim 28, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

47. **(Amended)** The method of claim 28, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

48. **(Reiterated)** The method of claim 28, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.

Please add the following new claims:

52. (New) A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons, comprising contacting said neurons with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 70% homologous to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.

53. (New) The method of claim 52, wherein said morphogen comprises residues 30-292 of SEQ ID NO: 2.

54. (New) The method of claim 52, wherein said morphogen comprises residues 330-431 of SEQ ID NO: 2.

55. (New) The method of claim 52, wherein said morphogen comprises residues 48-292 of SEQ ID NO: 2.

56. (New) The method of claim 52, wherein said morphogen comprises the amino acid sequence of SEQ ID NO: 2.

57. (New) The method of claim 52, wherein said morphogen comprises residues 293-329 of SEQ ID NO: 2.

58. (New) The method of claim 52, wherein said morphogen comprises residues 293-431 of SEQ ID NO: 2.

59. (New) The method of claim 52, wherein said morphogen comprises residues 30-431 of SEQ ID NO: 2.

The claims presented above incorporate changes as indicated by the marked-up versions below.

28. **(Amended Twice)** A method for enhancing the formation and development of dendrites and synapses in hippocampal neurons ~~cells~~, comprising contacting said neurons ~~cells~~ with a morphogen selected from: an OP-1 polypeptide, a BMP-2 polypeptide, a BMP-5 polypeptide, a BMP-6 polypeptide, and or a 60A polypeptide, wherein said morphogen has a conserved C-terminal seven-cysteine skeleton at least about 60% identical to residues 330-431 of human OP-1 (SEQ ID NO: 2), and wherein said morphogen induces dendrite outgrowth in said hippocampal neuron.
46. **(Amended)** The method of claim 28, wherein said morphogen comprises residues 292-330 ~~293-329~~ of SEQ ID NO: 2.
47. **(Amended)** The method of claim 28, wherein said morphogen comprises residues 292-431 ~~293-431~~ of SEQ ID NO: 2.